

What is claimed is:

1. A method of providing printing services, comprising:
 - providing a spooling server capable of receiving and storing one or more print jobs from a print job source via a network; and
 - providing a printer polling device capable of polling the spooling server via the network to identify a print job associated with the printer polling device.
2. A method in accordance with claim 1, further comprising:
 - transmitting an identified print job from the spooling server to the printer polling device; and
 - printing said identified print job at a printer coupled to the printer polling device.
3. A method in accordance with claim 1, wherein said printer polling device periodically polls the spooling server to identify a print job associated with the printer polling device.
4. A method in accordance with claim 1, wherein the network comprises:
 - at least one of a local area network, a wide area network, a global network, and the Internet.

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5. A method in accordance with claim 1, wherein:
 said printer polling device is located within a gateway firewall; and
 said spooling server is located outside said gateway firewall.
6. A method in accordance with claim 5, wherein:
 the print job is forwarded to the spooling server as web-style traffic and received at the printer polling device as web-style traffic.
7. A method in accordance with claim 5, wherein:
 the print job is forwarded to the spooling server such that reconfiguration of the gateway firewall is not required.
8. A method in accordance with claim 1, wherein:
 the print job source is located at and in communication with a first local area network;
 the printer polling device is located at and in communication with a second local area network; and
 the spooling server is located outside of the first and second local area networks.
9. A method in accordance with claim 8, wherein:

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the print job source communicates with the spooling server via a first gateway firewall which controls access to the first local area network; and

the printer polling device communicates with the spooling server via a second gateway firewall which controls access to the second local area network.

10. A method in accordance with claim 1, wherein the printer polling device is one of (i) a stand-alone device connected to the printer via a standard printer port, (ii) integrated into the firmware of the printer, or (iii) integrated into the software of a network print server.

11. A method in accordance with claim 1, further comprising:

charging a fee to access the spooling server.

12. A method in accordance with claim 11, wherein the fee is based on one of print job size in bytes, print job size in number of pages, print job type, time for printing, time for storage, monthly fee, per use fee, lifetime membership, monthly membership, use of color, use of black and white, page size, location, convenience, number of images, print quality, or image quality.

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13. A method in accordance with claim 11, wherein:

the fee is charged for at least one of providing a print job to the spooling server and retrieving a print job from the spooling server.

14. A method in accordance with claim 11, wherein the fee can be paid via at least one of (i) a client device associated with the print job source; or (ii) the printer polling device.

15. A method in accordance with claim 1, wherein:

the spooling server stores the one or more print job(s) in at least one spooling queue.

16. A method in accordance with claim 1, further comprising:

providing for encryption of the print job at the print job source; and

providing for decryption of the print job at the printer polling device.

17. A method in accordance with claim 1, wherein the print job comprises a document provided by a content provider.

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18. A method in accordance with claim 17, wherein said content provider is one of a newspaper, a magazine, a periodical, a document provider, a graphic arts provider, a notification service, an Internet content provider, a merchant, a financial institution, a government agency, or a shipping company.

19. A method in accordance with claim 17, wherein the print job is provided by the content provider on a subscription basis.

20. A method in accordance with claim 17, wherein a single print job is provided by the content provider for multiple users.

21. A method in accordance with claim 1, wherein the printer polling device comprises:

- a user interface;
- a connection to the network; and
- a connection to the printer.

22. A method in accordance with claim 1, further comprising:

- storing each print job on the spooling server according to a personal identification number (PIN).

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23. A method in accordance with claim 22, further comprising:

communicating from the spooling server to the printer polling device a list of print jobs associated with the PIN which are stored at the spooling server; and

providing for the selection of a print job.

24. A method in accordance with claim 22, further comprising:

storing a plurality of print jobs on the spooling server according to the PIN.

25. A method in accordance with claim 22, wherein:

the PIN is provided to the spooling server via one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal;

the list of available print jobs is displayed on one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal; and

selection of an available print job is made via a user interface associated with the printer polling

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device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal.

26. A method in accordance with claim 1, wherein the printer polling device is a portable device.

27. A method in accordance with claim 1, wherein the printer polling device may be operably associated with a variety of printer types.

28. A method in accordance with claim 1, wherein the print job is provided to the spooling server without a pre-determined print destination.

29. A method in accordance with claim 1, further comprising:

 providing for designation of a desired print location for the print job at the print job source;

 providing for communication of the desired print location to the spooling server; and

 printing the print job at the desired print location when the printer polling device at the desired print location polls the spooling server and identifies the print job.

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34. A method in accordance with claim 1, further comprising:

40. A method in accordance with claim 39, further comprising:

providing the operator with vendor contact information to facilitate obtaining printer supplies or service.

41. A method in accordance with claim 37, further comprising:

providing for automatic on-line ordering of printer supplies as required by printer status.

42. A method in accordance with claim 1, wherein the print job comprises at least one of a document, a poster, an image, a coupon, a ticket, a certificate, a check, a list, a schedule, a periodical, a unit of currency, a negotiable instrument, postage, a bill of lading, a lottery or gaming ticket, a token, food stamps, a license, a permit, a pass, a passport, a ballot, a citation, identification, a copy-protection key, a proof-of-purchase, a warranty, a receipt, a transcript, or a library card.

43. A method in accordance with claim 1, further comprising:

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uploading the document from the client device to the spooling server.

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communicating the directory to the printer polling
device;
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        presenting the directory at the printer polling
device; and

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providing for selection of a print job from the directory.

45. A method in accordance with claim 44, wherein presenting said directory comprises one of a visual presentation or an audio presentation.

46. A method in accordance with claim 43, wherein the client device periodically polls the spooling server.

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47. A method in accordance with claim 1, wherein communications with the spooling server are enabled via at least one of a telephone, a personal digital assistant device, a computer, an Internet appliance, a web browser, or a dedicated terminal.

48. A method in accordance with claim 1, wherein communications with the spooling server are enabled via one of an audio interface or a visual interface.

49. A method in accordance with claim 1, further comprising:

 providing a communication device for providing status of the print job stored on the spooling server.

50. A method in accordance with claim 49, wherein the status of the print job comprises at least one of filename, file size, author, creation date, print job lifetime, image, title, contents, personal identification number, recipient, job number, or reference number.

51. A method in accordance with claim 49, wherein the communication device comprises one of a telephone, a computer, an Internet appliance, a personal digital assistant device, or a dedicated terminal.

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52. A method in accordance with claim 1, wherein the print job source is one of a computer, a personal digital assistant device, an Internet appliance, a facsimile machine, a scanner, a telephone, or a dedicated terminal.

53. A method in accordance with claim 1, wherein said printer polling device is capable of polling multiple spooling servers.

54. A method in accordance with claim 1, further comprising:

providing for the communication between said spooling server and other servers; and

receiving a print job from at least one of the other servers at the spooling server.

55. A system for providing printing services, comprising:

a spooling server capable of receiving and storing one or more print jobs from a print job source via a network; and

a printer polling device capable of polling the spooling server via the network to identify a print job associated with the printer polling device.

56. A system in accordance with claim 55, wherein:

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an identified print job is transmitted from the spooling server to the printer polling device; and said identified print job is printed at a printer coupled to the printer polling device.

57. A system in accordance with claim 55, wherein said printer polling device periodically polls the spooling server to identify a print job associated with the printer polling device.

58. A system in accordance with claim 55, wherein the network comprises:

at least one of a local area network, a wide area network, a global network, and the Internet.

59. A system in accordance with claim 55, wherein:

said printer polling device is located within a gateway firewall; and

said spooling server is located outside said gateway firewall.

60. A system in accordance with claim 59, wherein:

the print job is forwarded to the spooling server as web-style traffic and received at the printer polling device as web-style traffic.

61. A system in accordance with claim 59, wherein:
the print job is forwarded to the spooling server
such that reconfiguration of the gateway firewall is not
required.

62. A system in accordance with claim 55, wherein:
the print job source is located at and in
communication with a first local area network;
the printer polling device is located at and in
communication with a second local area network; and
the spooling server is located outside of the first
and second local area networks.

63. A system in accordance with claim 62, wherein:
the print job source communicates with the spooling
server via a first gateway firewall which controls access
to the first local area network; and
the printer polling device communicates with the
spooling server via a second gateway firewall which
controls access to the second local area network.

64. A system in accordance with claim 55, wherein the
printer polling device is one of (i) a stand-alone device
connected to the printer via a standard printer port,
(ii) integrated into the firmware of the printer, or

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69. A system in accordance with claim 55, wherein:

the spooling server stores the one or more print job(s) in at least one spooling queue.

70. A system in accordance with claim 55, further comprising:

an encryption device for encryption of the print job at the print job source; and

a decryption device for decryption of the print job at the printer polling device.

71. A system in accordance with claim 55, wherein the print job comprises a document provided by a content provider.

72. A system in accordance with claim 71, wherein said content provider is one of a newspaper, a magazine, a periodical, a document provider, a graphic arts provider, a notification service, an Internet content provider, a merchant, a financial institution, a government agency, or a shipping company.

73. A system in accordance with claim 71, wherein the print job is provided by the content provider on a subscription basis.

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74. A system in accordance with claim 71, wherein a single print job is provided by the content provider for multiple users.

75. A system in accordance with claim 55, wherein the printer polling device comprises:

- a user interface;
- a connection to the network; and
- a connection to the printer.

76. A system in accordance with claim 55, wherein:

each print job is stored on the spooling server according to a personal identification number (PIN).

77. A system in accordance with claim 76, wherein:

the spooling server communicates to the printer polling device a list of print jobs associated with the PIN which are stored at the spooling server; and
the selection of a print job is provided for.

78. A system in accordance with claim 76, wherein:

a plurality of print jobs are stored on the spooling server according to the PIN.

79. A system in accordance with claim 76, wherein:

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the PIN is provided to the spooling server via one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal;

the list of available print jobs is displayed on one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal; and

selection of an available print job is made via a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal.

80. A system in accordance with claim 55, wherein the printer polling device is a portable device.

81. A system in accordance with claim 55, wherein the printer polling device may be operably associated with a variety of printer types.

82. A system in accordance with claim 55, wherein the print job is provided to the spooling server without a pre-determined print destination.

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83. A system in accordance with claim 55, wherein:

a desired print location for the print job is designated at the print job source;

the desired print location is communicated to the spooling server; and

the print job is printed at the desired print location when the printer polling device at the desired print location polls the spooling server and identifies the print job.

84. A system in accordance with claim 55, wherein:

a substantially specific time for printing a print job is designated; and

said print job is made available for printing from the spooling server only at the designated substantially specific time.

85. A system in accordance with claim 55, wherein:

a lifetime of the print job is designated, wherein said print job will be stored only for the designated lifetime.

86. A system in accordance with claim 55, wherein:

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a number of printings of said print job is designated, wherein said print job can only be printed the designated number of times.

87. A system in accordance with claim 86, wherein:

the print job is one of a negotiable instrument, a stamp, a coupon, a certificate, a check, a unit of currency, a token, or a receipt.

88. A system in accordance with claim 55, wherein:

one or more recipients of said print job are designated, wherein the print job can only be printed by the designated one or more recipients.

89. A system in accordance with claim 55, wherein the print job source is connected to the network using DHCP protocol.

90. A system in accordance with claim 55, wherein the printer polling device is connected to the network using DHCP protocol.

91. A system in accordance with claim 55, wherein the printer polling device communicates printer status to the spooling server.

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92. A system in accordance with claim 91, wherein the printer status comprises at least one of a printer ready indication, an on-line indication, toner level information, paper supply information, or error information.

93. A system in accordance with claim 91, wherein:
a printer operator is notified when said printer status indicates that the printer requires attention.

94. A system in accordance with claim 93, wherein:
the operator is provided with vendor contact information to facilitate obtaining printer supplies or service.

95. A system in accordance with claim 91, wherein:
automatic on-line ordering of printer supplies as required by printer status is provided.

96. A system in accordance with claim 55, wherein the print job comprises at least one of a document, a poster, an image, a coupon, a ticket, a certificate, a check, a list, a schedule, a periodical, a unit of currency, a negotiable instrument, postage, a bill of lading, a lottery or gaming ticket, a token, food stamps, a license, a permit, a pass, a passport, a ballot, a

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citation, identification, a copy-protection key, a proof-of-purchase, a warranty, a receipt, a transcript, or a library card.

97. A system in accordance with claim 55, further comprising:

an agent program that provides a directory of documents to the spooling server, said agent program enabling a client device associated with the print job source to poll the spooling server to determine whether the spooling server requires a document from the directory to complete a print job; wherein:

the document is uploaded from the client device to the spooling server.

98. A system in accordance with claim 97, wherein:

the directory is communicated to the printer polling device;

the directory is presented at the printer polling device; and

a print job can be selected from the directory.

99. A system in accordance with claim 98, wherein said directory is presented via one of a visual presentation or an audio presentation.

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computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal.

106. A system in accordance with claim 55, wherein the print job source is one of a computer, a personal digital assistant device, an Internet appliance, a telephone, a facsimile machine, a scanner, or a dedicated terminal.

107. A system in accordance with claim 55, wherein said printer polling device is capable of polling multiple spooling servers.

108. A system in accordance with claim 55, wherein:
 said spooling server is capable of communicating with other servers; and
 said spooling server is capable of receiving a print job from at least one of the other servers.

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